

Peeler, Tonya

From: Norton, Ted
Sent: Wednesday, April 02, 2014 12:34 PM
To: 'Ernst, William D'
Cc: Woods, Julianne
Subject: SCL Dallas Crossing Geotech Boring
Attachments: 040214tn1_Table 1 BP2 Soil Data Comparison PoleLocations.pdf; 040214tn1_Table 2 BP2 GW Data Comparison PoleLocations.pdf; 0131646014F16_PoleLocationQuery_032614.pdf
Categories: Red Category

Seattle City Light (SCL) is preparing to install a steel monopole in the plant southwest corner of Boeing Plant 2 in association with the Dallas Utility Crossing project. The monopole will be approximately 8 feet in diameter and extend to a depth of 80 feet below ground surface (bgs) or more. Prior to final design, SCL will install a geotechnical boring to depth (approximately 80 to 100 feet bgs). The exact construction details will not be designed until after the geotechnical drilling and evaluation is complete. The supporting activities will include installing and sampling a single boring using mud rotary methodologies. Soil cuttings generated by the drilling activities will be placed in drums or other appropriate container(s) and disposed of offsite following Boeing waste handling procedures. No sampling for environmental characterization is planned for this project. The drilling is tentatively set to start in April.

The proposed boring location is presented on the attached Figure 1 which also identifies a 25 foot buffer around the proposed geotech boring. The boring will be located within the 2-66 sheetpile which is designated as a Resource Conservation and Recovery Act (RCRA) Unit (2-66 Sheetpile). The unit was subject to a soil/groundwater interim measure (IM) in 2012 in which the soil from ground surface to approximately 11 feet bgs was excavated and transported offsite for disposal. Prior to backfilling the excavation within the sheetpile 3DME micro-emulsion (vegetable oil) was introduced to exposed groundwater to support groundwater remediation. The excavation was backfilled to grade with clean imported fill and paved.

This single boring scope of work does not meet the general threshold for a formal letter/technical memorandum for EPA notification. To support health and safety aspects of the work and waste management planning efforts I have provided historical groundwater and soil data representative of relatively "current conditions" within a 25 foot buffer of the proposed boring location for this project.

Golder Associates Inc. has reviewed the analytical soil and groundwater data from sample locations within 25 feet of the boring as presented in Figure 1. As indicated above, soil within the sheetpile is clean fill to 11 feet bgs and therefore there is no analytical soil data for 0 to 11 feet bgs interval. Soil data provided is from 10 to 30 feet bgs interval recognizing the soil from 10 to 11 feet bgs has to be removed but provided to support health and safety evaluations.

Analytical soil data are compared to the updated 2011 RCRA Soil Target Media Cleanup Levels (TMCLs). TMCLs are conservative cleanup concentration values that represent cleanup criteria for unrestricted land use and are very conservative for industrial property like Plant 2. Ten soil samples collected from seven locations were analyzed for one or more of the following analytical suites, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), carcinogenic polynuclear hydrocarbons (cPAHs), total petroleum hydrocarbons (TPH) and metals. Table 1 provides all soil analytical results for constituents that were detected in samples within the 25 foot buffer from 10 to 30 feet bgs. Only one sample (2-66-DP-14-10S) had any detected constituents (trichloroethylene) that exceeded TMCLs. Trichloroethene was detected at a concentration of 230 µg/kg in the sample collected 10 feet bgs, this soil was removed during the 2012 IM.

Analytical groundwater data are compared to updated 2011 RCRA groundwater TMCLs. Groundwater results were limited to data collected between 2005 and 2011, which represents the period from when the RCRA data gaps investigation was conducted in the 2-66 Area and the 2-66 Sheetpile wells were abandoned in preparation for the IM. The monitoring wells within the sheetpile were abandoned in association with the IM. Forty samples were collected from seven locations and were analyzed for VOCs, SVOCs, TPH, metals and other minor constituents. Table 2 provides all groundwater analytical results for constituents that were detected in groundwater samples at concentrations that exceed TMCLs within the 25 foot buffer from 11 and 80 feet bgs. Analytical results for those constituents detected at concentrations greater than TMCLs are summarized by well screen intervals below:

- 11 to 25 feet bgs – Cadmium and trichloroethene were the only constituents detected at concentrations exceeding their respective TMCLs. Cadmium was detected in one sample at concentration of 0.6 µg/L and trichloroethene was detected at concentrations between 2.1 and 26 µg/L.
- 25 to 30 feet bgs – Six constituents were detected at concentrations exceeding their respective TMCLs. Arsenic (9.0 µg/L) and zinc (338 µg/L) were detected once each, benzene and nickel were detected in limited number of samples (three and eight) at concentrations up to 3.7 and 35.8 µg/L, respectively. Trichloroethene and vinyl chloride were detected in various samples at concentrations between 1.5 and 96 µg/L and 3.5 and 210 µg/L, respectively.
- 75 to 80 feet bgs – Nickel was the only constituent detected (15 µg/L) at a concentration exceeding its TMCL.

The analytical results adequately characterize the soils and groundwater likely to be encountered in the excavation, and preconstruction sampling is not planned.

Thanks,

Ted

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Table 1: Soil Analytical Data (by Constituent)
 Seattle City Light Monopole Geotech Boring
 Detected Constituents
 Boeing Plant 2

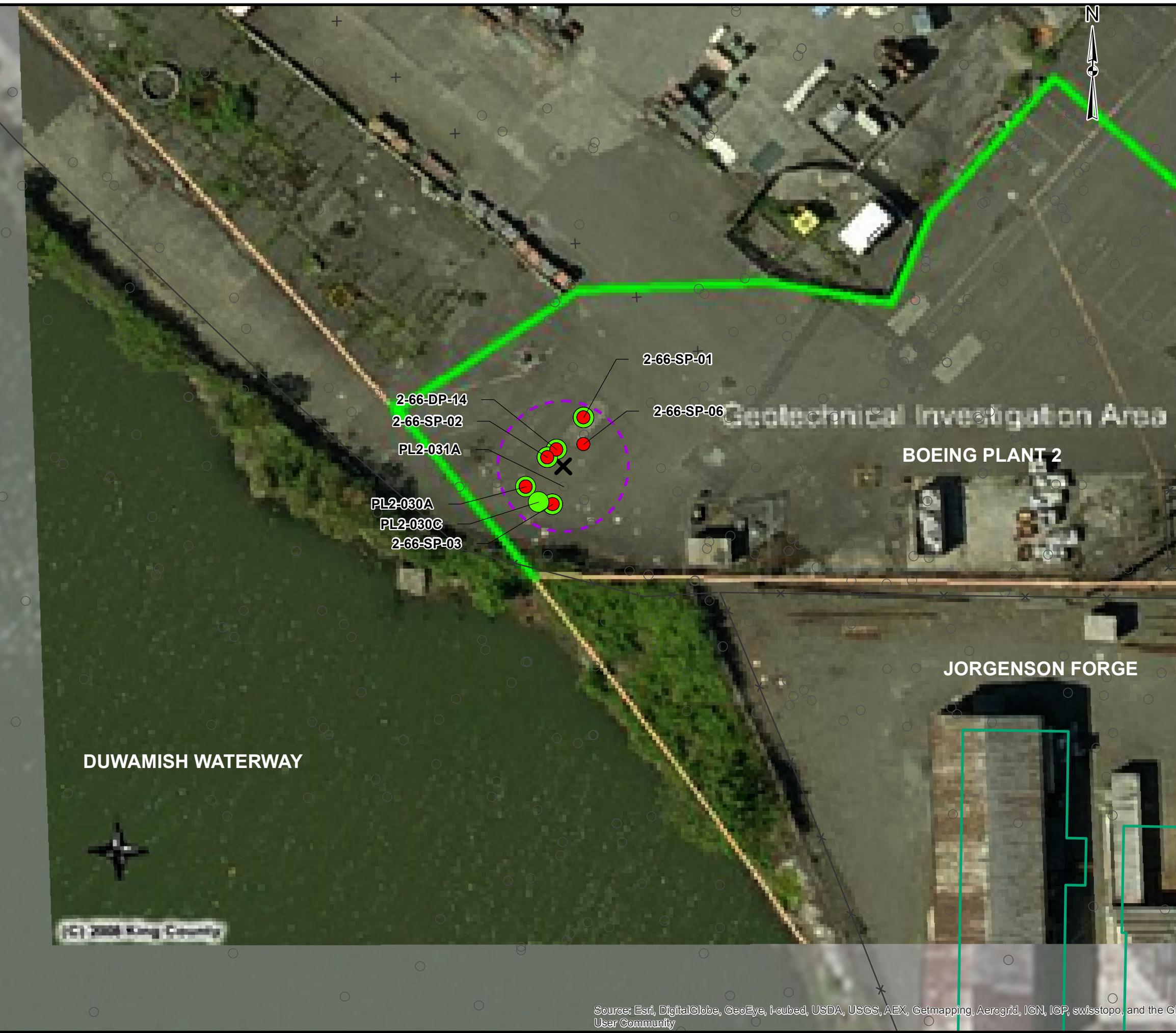
Location	Sample ID	Date	Top Depth	Bottom Depth	Depth Unit	Analytical Method	Parameter	Fraction	Value	Qualifier	Detect	Unit	2014 Final Soil TMCL	Exceeds 2014 Final Soil TMCL?
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8260B	Acetone	N	18		TRUE	µg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 8260C	Acetone	N	13		TRUE	µg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 8260C	Acetone	N	12		TRUE	µg/kg		
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 8260C	Acetone	N	9.7		TRUE	µg/kg		
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 8260C	Acetone	N	9.2		TRUE	µg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Aluminum	T	6610		TRUE	mg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Aluminum	T	6480		TRUE	mg/kg		
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Aluminum	T	6210		TRUE	mg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Barium	T	24.8		TRUE	mg/kg	680	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Barium	T	18.9		TRUE	mg/kg	680	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Barium	T	15.9	J	TRUE	mg/kg	680	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Barium	T	15.4	J	TRUE	mg/kg	680	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8270SIM	Benz(a)pyrene	N	7.1		TRUE	µg/kg		
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8270SIM	Benz(b)fluoranthene	N	9		TRUE	µg/kg		
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Beryllium	T	0.2		TRUE	mg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Cadmium	T	0.6	J	TRUE	mg/kg	8.9	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Calcium	T	3710		TRUE	mg/kg		
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Calcium	T	3470		TRUE	mg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Calcium	T	3340		TRUE	mg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Chromium	T	3200		TRUE	mg/kg		
PL2-030A	W23-SB-06644-0300	34592	30	30	ft	EPA 8260	Chloroform	N	2.9		TRUE	µg/kg		
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Chromium	T	23.1		TRUE	mg/kg		
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Chromium	T	12.4		TRUE	mg/kg		
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Chromium	T	12.2		TRUE	mg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Chromium	T	10.3		TRUE	mg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Chromium	T	9.1		TRUE	mg/kg		
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8270SIM	Chrysene	N	11		TRUE	µg/kg		
PL2-030A	W23-SB-06644-0150	34592	15	15	ft	EPA 8260	cis-1,2-Dichloroethene	N	7.5		TRUE	µg/kg	2600	NO
PL2-030A	W23-SB-06644-0200	34592	20	20	ft	EPA 8260	cis-1,2-Dichloroethene	N	5.1		TRUE	µg/kg	2600	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8260B	cis-1,2-Dichloroethene	N	3.9		TRUE	µg/kg	2600	NO
PL2-030A	W23-SB-06644-0300	34592	30	30	ft	EPA 8260	cis-1,2-Dichloroethene	N	2.3		TRUE	µg/kg	2600	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 8260C	cis-1,2-Dichloroethene	N	1.4		TRUE	µg/kg	2600	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 8260C	cis-1,2-Dichloroethene	N	1.2		TRUE	µg/kg	2600	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Cobalt	T	3.8		TRUE	mg/kg	23	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Cobalt	T	3.7		TRUE	mg/kg	23	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Cobalt	T	3.2		TRUE	mg/kg	23	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Cobalt	T	2.7		TRUE	mg/kg	23	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Copper	T	38.9		TRUE	mg/kg	80	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Copper	T	9.8		TRUE	mg/kg	80	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Copper	T	8.5		TRUE	mg/kg	80	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Copper	T	7.3		TRUE	mg/kg	80	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Copper	T	6.2		TRUE	mg/kg	80	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8270SIM	Fluoranthene	N	8.4		TRUE	µg/kg		
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Iron	T	23400		TRUE	µg/kg	55000	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Iron	T	11300		TRUE	µg/kg	55000	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Iron	T	10500		TRUE	µg/kg	55000	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Iron	T	9960		TRUE	µg/kg	55000	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Iron	T	8950		TRUE	µg/kg	55000	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Lead	T	3		TRUE	mg/kg	250	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Magnesium	T	8130		TRUE	mg/kg		
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Magnesium	T	1880		TRUE	mg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Magnesium	T	1810		TRUE	mg/kg		
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Magnesium	T	1620		TRUE	mg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Manganese	T	371		TRUE	mg/kg	1800	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Manganese	T	111		TRUE	mg/kg	1800	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Manganese	T	78.9		TRUE	mg/kg	1800	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Manganese	T	76.6		TRUE	mg/kg	1800	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Manganese	T	64.4		TRUE	mg/kg	1800	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Molybdenum	T	0.8		TRUE	mg/kg	20	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Molybdenum	T	0.6		TRUE	mg/kg	20	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 6010B	Nickel	T	19		TRUE	mg/kg	210	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Nickel	T	7		TRUE	mg/kg	210	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Nickel	T	7		TRUE	mg/kg	210	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Nickel	T	7		TRUE	mg/kg	210	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Nickel	T	6		TRUE	mg/kg	210	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8270SIM	Pyrene	N	9.6		TRUE	µg/kg	240000	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Silver	T	0.5		TRUE	mg/kg		
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8260B	Tetrachloroethene	N	0.7		TRUE	µg/kg	250	NO
2-66-SP-14	2-66-SP-14-10S	38938	10	10	ft	EPA 8270SIM	Total cPAH as Bap TEQ	N	8.11		TRUE	µg/kg	15	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	NWTPH-Dx-Cleaned	TPH - Motor Oil Range	N	38		TRUE	mg/kg	2000	NO
2-66-DP-14	2-66-DP-14-10S	38938	10	10	ft	EPA 8260B	Trichloroethene	N	230		TRUE	µg/kg	51	YES
PL2-030A	W23-SB-06644-0150	34592	15	15	ft	EPA 8260	Trichloroethene	N	38		TRUE	µg/kg	51	NO
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 8260C	Trichloroethene	N	24		TRUE	µg/kg	51	NO
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 8260C	Trichloroethene	N	21		TRUE	µg/kg	51	NO
PL2-030A	W23-SB-06644-0100	34592	10	10	ft	EPA 8260	Trichloroethene	N	20		TRUE	µg/kg	51	NO
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 8260C	Trichloroethene	N	17		TRUE	µg/kg	51	NO
PL2-030A	W23-SB-06644-0200	34592	20	20	ft	EPA 8260	Trichloroethene	N	14		TRUE	µg/kg	51	NO
PL2-030A	W23-SB-06644-0300	34592	30	30	ft	EPA 8260	Trichloroethene	N	11		TRUE	µg/kg	51	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 8260C	Trichloroethene	N	1.5		TRUE	µg/kg	51	NO
2-66-SP-01	2-66-SP-01-15-S-0	40863	10	15	ft	EPA 6010B	Vanadium	T	46		TRUE	mg/kg		
2-66-SP-02	2-66-SP-02-15-S-0	40863	10	15	ft	EPA 6010B	Vanadium	T	42.7		TRUE	mg/kg		
2-66-SP-06	2-66-SP-06-15-S-0	40864	10	15	ft	EPA 6010B	Vanadium	T	35.4		TRUE	mg/kg		
2-66-SP-03	2-66-SP-03-15-S-0	40864	10	15	ft	EPA 6010B	Vanadium	T	35.3		TRUE	mg		

Table 2: Groundwater Analytical Data (by Interval then Constituent)**Seattle City Light Monopole Geotech Boring****Detected Constituents That Exceed TMCLS****Boeing Plant 2**

Location	Sample ID	Date	Top Depth	Bottom Depth	Depth Unit	Analytical Method	Parameter	Fraction	Value	Qualifier	Detect	Unit	2014 Groundwater TMCL (ug/L)	Exceeds 2014 GW TMCL?
2-66-DP-14	2-66-DP-14-13-W	09-Aug-06	13	13	ft	EPA 200.8	Cadmium	D	0.6		TRUE	ug/L	5.60E-01	YES
2-66-DP-14	2-66-DP-14-13-W	09-Aug-06	13	13	ft	EPA 8260B	Trichloroethene	N	17		TRUE	ug/L	1.40E+00	YES
2-66-SP-02	2-66-SP-02-15-W-0	17-Nov-11	11	15	ft	EPA 8260C	Trichloroethene	N	26		TRUE	ug/L	1.40E+00	YES
2-66-SP-03	2-66-SP-03-15-W-0	11/17/2011	11	15	ft	EPA 8260C	Trichloroethene	N	24		TRUE	ug/L	1.40E+00	YES
2-66-SP-01	2-66-SP-01-15-W-0	17-Nov-11	11	15	ft	EPA 8260C	Trichloroethene	N	8.8		TRUE	ug/L	1.40E+00	YES
2-66-SP-03	2-66-SP-03-20-W-0	11/17/2011	16	20	ft	EPA 8260C	Trichloroethene	N	24		TRUE	ug/L	1.40E+00	YES
2-66-SP-01	2-66-SP-01-20-W-0	17-Nov-11	16	20	ft	EPA 8260C	Trichloroethene	N	9		TRUE	ug/L	1.40E+00	YES
2-66-SP-02	2-66-SP-02-20-W-0	11/17/2011	16	20	ft	EPA 8260C	Trichloroethene	N	3.1		TRUE	ug/L	1.40E+00	YES
2-66-SP-02	2-66-SP-02-25-W-0	11/17/2011	21	25	ft	EPA 8260C	Trichloroethene	N	4.3		TRUE	ug/L	1.40E+00	YES
2-66-SP-03	2-66-SP-03-25-W-0	11/17/2011	21	25	ft	EPA 8260C	Trichloroethene	N	2.1	J	TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-100721-PL2-031A-0	7/21/2010	25	30	ft	EPA 200.8	Arsenic	D	9		TRUE	ug/L	8.00E+00	YES
PL2-030A	GW060501-PL2-030A	5/1/2006	25	30	ft	EPA 8260B	Benzene	N	3.7		TRUE	ug/L	2.00E+00	YES
PL2-030A	GW060731-PL2-030A	7/31/2006	25	30	ft	EPA 8260B	Benzene	N	2.6		TRUE	ug/L	2.00E+00	YES
PL2-030A	GW060206-PL2-030A	2/6/2006	25	30	ft	EPA 8260B	Benzene	N	2.4	J	TRUE	ug/L	2.00E+00	YES
PL2-031A	GW-060501-PL2-031A-0	5/1/2006	25	30	ft	EPA 200.8	Nickel	T	35.8		TRUE	ug/L	8.20E+00	YES
PL2-030A	GW090203-PL2-030A	2/3/2009	25	30	ft	EPA 200.8	Nickel	T	35		TRUE	ug/L	8.20E+00	YES
PL2-031A	GW-071116-PL2-031A-0	11/16/2007	25	30	ft	EPA 200.8	Nickel	T	18.5		TRUE	ug/L	8.20E+00	YES
PL2-031A	GW-080207-PL2-031A-0	2/7/2008	25	30	ft	EPA 200.8	Nickel	T	13.7		TRUE	ug/L	8.20E+00	YES
PL2-030A	GW090203-PL2-030A	2/3/2009	25	30	ft	EPA 200.8	Nickel	D	13		TRUE	ug/L	8.20E+00	YES
PL2-031A	GW-080516-PL2-031A-0	5/16/2008	25	30	ft	EPA 200.8	Nickel	T	11.3		TRUE	ug/L	8.20E+00	YES
PL2-031A	GW-070502-PL2-031A-0	5/2/2007	25	30	ft	EPA 200.8	Nickel	T	9.2		TRUE	ug/L	8.20E+00	YES
PL2-031A	GW-080805-PL2-031A-0	8/5/2008	25	30	ft	EPA 200.8	Nickel	T	8.6		TRUE	ug/L	8.20E+00	YES
PL2-031A	GW-070201-PL2-031A-0	2/1/2007	25	30	ft	EPA 8260B	Trichloroethene	N	96		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-051101-PL2-031A-0	11/1/2005	25	30	ft	EPA 8260B	Trichloroethene	N	30		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-050202-PL2-031A-0	2/2/2005	25	30	ft	EPA 8260B	Trichloroethene	N	24		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-060209-PL2-031A-0	2/9/2006	25	30	ft	EPA 8260B	Trichloroethene	N	24		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-110420-PL2-031A-0	4/20/2011	25	30	ft	EPA 8260C	Trichloroethene	N	20		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-060501-PL2-031A-0	5/1/2006	25	30	ft	EPA 8260B	Trichloroethene	N	19		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-050801-PL2-031A-0	8/1/2005	25	30	ft	EPA 8260B	Trichloroethene	N	16		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-070502-PL2-031A-0	5/2/2007	25	30	ft	EPA 8260B	Trichloroethene	N	13	J	TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-070810-PL2-031A-0	8/10/2007	25	30	ft	EPA 8260B	Trichloroethene	N	13		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-080516-PL2-031A-0	5/16/2008	25	30	ft	EPA 8260B	Trichloroethene	N	13		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-080805-PL2-031A-0	8/5/2008	25	30	ft	EPA 8260B	Trichloroethene	N	11		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-050505-PL2-031A-0	5/5/2005	25	30	ft	EPA 8260B	Trichloroethene	N	10		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-061108-PL2-031A-0	11/8/2006	25	30	ft	EPA 8260B	Trichloroethene	N	9.4		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-090721-PL2-031A-0	7/21/2009	25	30	ft	EPA 8260C	Trichloroethene	N	7.2		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-101020-PL2-031A-0	10/20/2010	25	30	ft	EPA 8260C	Trichloroethene	N	6.8		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-090421-PL2-031A-0	4/21/2009	25	30	ft	EPA 8260B	Trichloroethene	N	5.9		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-071116-PL2-031A-0	11/16/2007	25	30	ft	EPA 8260B	Trichloroethene	N	5.3		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-100420-PL2-031A-0	4/20/2010	25	30	ft	EPA 8260C	Trichloroethene	N	3.7		TRUE	ug/L	1.40E+00	YES
2-66-SP-03	2-66-SP-03-30-W-0	11/17/2011	26	30	ft	EPA 8260C	Trichloroethene	N	3.6		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-080207-PL2-031A-0	2/7/2008	25	30	ft	EPA 8260B	Trichloroethene	N	3.5		TRUE	ug/L	1.40E+00	YES
2-66-SP-02	2-66-SP-02-30-W-0	11/17/2011	26	30	ft	EPA 8260C	Trichloroethene	N	3.1		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-082708-PL2-031A-0	8/27/2008	25	30	ft	EPA 8260B	Trichloroethene	N	3		TRUE	ug/L	1.40E+00	YES
PL2-031A	GW-090121-PL2-031A-0	1/21/2009	25	30	ft	EPA 8260B	Trichloroethene	N	2		TRUE	ug/L	1.40E+00	YES
PL2-031A	2-66-PL2-031A-27-W	8/21/2006	25	30	ft	EPA 8260B	Trichloroethene	N	1.5		TRUE	ug/L	1.40E+00	YES
PL2-030A	GW050503-PL2-030A	5/3/2005	25	30	ft	EPA 8260B	Vinyl Chloride	N	210		TRUE	ug/L	2.40E+00	YES
PL2-030A	GW060501-PL2-030A	5/1/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	180		TRUE	ug/L	2.40E+00	YES

Table 2: Groundwater Analytical Data (by Interval then Constituent)**Seattle City Light Monopole Geotech Boring****Detected Constituents That Exceed TMCLs****Boeing Plant 2**

Location	Sample ID	Date	Top Depth	Bottom Depth	Depth Unit	Analytical Method	Parameter	Fraction	Value	Qualifier	Detect	Unit	2014 Groundwater TMCL (ug/L)	Exceeds 2014 GW TMCL?
PL2-030A	GW060206-PL2-030A	2/6/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	140		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW050801-PL2-030A	8/1/2005	25	30	ft	EPA 8260B	Vinyl Chloride	N	120		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-050505-PL2-031A-0	5/5/2005	25	30	ft	EPA 8260B	Vinyl Chloride	N	120		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW090810-PL2-030A	8/10/2009	25	30	ft	EPA 8260C	Vinyl Chloride	N	65		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-061108-PL2-031A-0	11/8/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	30		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW071112-PL2-030A	11/12/2007	25	30	ft	EPA 8260B	Vinyl Chloride	N	21		TRUE	µg/L	2.40E+00	YES
PL2-031A	2-66-PL2-031A-27-W	8/21/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	20		TRUE	µg/L	2.40E+00	YES
PL2-030A	2-66-PL2-030A-27-W	8/21/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	13		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW060731-PL2-030A	7/31/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	13		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW061106-PL2-DUP1	11/6/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	10		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-050801-PL2-031A-0	8/1/2005	25	30	ft	EPA 8260B	Vinyl Chloride	N	9.1		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-060209-PL2-031A-0	2/9/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	8.1		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW051031-PL2-030A	10/31/2005	25	30	ft	EPA 8260B	Vinyl Chloride	N	6.4		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-060501-PL2-031A-0	5/1/2006	25	30	ft	EPA 8260B	Vinyl Chloride	N	6.2		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW050201-PL2-030A	2/1/2005	25	30	ft	EPA 8260B	Vinyl Chloride	N	6	J	TRUE	µg/L	2.40E+00	YES
PL2-030A	GW070801-PL2-030A	8/1/2007	25	30	ft	EPA 8260B	Vinyl Chloride	N	4.8		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-090421-PL2-031A-0	4/21/2009	25	30	ft	EPA 8260B	Vinyl Chloride	N	3.5		TRUE	µg/L	2.40E+00	YES
PL2-031A	GW-100721-PL2-031A-0	7/21/2010	25	30	ft	EPA 8260C	Vinyl Chloride	N	2.6		TRUE	µg/L	2.40E+00	YES
PL2-030A	GW060731-PL2-030A	7/31/2006	25	30	ft	EPA 6010B	Zinc	T	338		TRUE	µg/L	5.60E+01	YES
PL2-030C	GW110131-PL2-030C	1/31/2011	75.5	80	ft	EPA 200.8	Nickel	T	15		TRUE	µg/L	8.20E+00	YES



LEGEND

- Soil Sample Location
- Groundwater Sample Location
- Pole Location (Approximate)
- Other Sample Locations
- Buildings Outline
- 20 ft Buffer Around Pole Location

REFERENCES

- Golder Associates Inc. (Sample Locations)
- ESRI (Aerial Imagery)
- COORDINATE SYSTEM: NAD 1983 StatePlane Washington North FIPS 4601 Feet



PROJECT NO.	013-1646-014	0131646014F16_PoleLocationQuery_032614.mxd
DESIGN	-	-
GIS	TH	28 Mar. 2014
CHECK	TN	28 Mar. 2014
REVIEW	TN	28 Mar. 2014

FIGURE: X